IN THE CLAIMS:

1. (Currently amended) A method of translating a virtual address to a physical address in a real time operating system, the method comprising:

indexing into a first level table using a portion of the virtual address and a base address register or location;

generating an offset to a second level table based on an entry in the first level table combined with a portion of the virtual address; and

combining the virtual address with an entry in the second level table obtained using the offset;

wherein multiple user programs in partitions co-exist, with each partition having a unique set of tables which are selected by the operating system upon partition activation by loading the base address register or location for the table corresponding to that partition.

2. (Original) The method of claim 1 wherein the entry in the second level table comprises multiple control bits for all pages of a decode area and valid bits for each page in the decode area.

3. (Original) The method of claim 1 wherein a single half-word in the second level table corresponds to two hardware register words.

4. (Original) The method of claim 3 wherein the single half-word is formed to minimize operations of a computer implementing the method.

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